



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,237	11/13/2003	Hormuzd M. Khosravi	5038-335	1182
<div>32231      7590      07/02/2007 MARGER JOHNSON &amp; MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204</div>				
			EXAMINER BENZON, GREG C	
			ART UNIT 2144	PAPER NUMBER
			MAIL DATE 07/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/713,237

Applicant(s)

KHOSRAVI ET AL.

Examiner

Greg Bengzon

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 11/13/2003, 05/09/2005.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

This application has been examined. Claims 1-24 are pending.

### ***Priority***

The effective date of the claims described in this application is November 13, 2003.

### ***Information Disclosure Statement***

The information disclosure statements (IDS) submitted on 11/13/2003, 05/09/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 22-24 describe 'an article of machine readable instructions' which are not tangibly embodied in any computer-readable media.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites '*an application programming interface in accordance with the Network Processing Forum.*'

Claim 8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everdell (US Publication 2002/0165961).

Everdell disclosed (re. Claim 1) a network device, comprising: a control point; (Everdell-Paragraph 8, *each distributed processor within the network device*) an infrastructure module resident on the control point constructed and arranged to allow the control point to connect and exchange information with other control points; (Everdell-Paragraph 10, Paragraph 145) and a communication library resident on the control point (Everdell-Paragraph 109,

Art Unit: 2144

Paragraph 125, 'API') constructed and arranged to provide information to the control point about control plane protocol modules on the current control points.

(Everdell-Paragraph 6)

Everdell disclosed a network device having a distributed architecture may include an internal out-of-band control plane. Each of the distributed processors is connected to the out-of-band control plane, and the processors use the out-of-band control plane to transmit control information.

Everdell disclosed (re. Claim 2) the network device further comprising a control plane protocol module. (Everdell-Paragraph 166, '*master control driver MCD*', Paragraph 577, '*Master SRM*')

Everdell disclosed (re. Claim 3) a worker control plane protocol module. (Everdell-Paragraph 577, '*local resiliency managers LRM*')

Everdell disclosed (re. Claim 4) a controller control plane protocol module. (Everdell-Paragraph 166, '*master control driver MCD*', Paragraph 577, '*Master SRM*')

Everdell disclosed (re. Claim 5) a control plane. (Everdell-Paragraph 10, Paragraph 145)

Everdell disclosed (re. Claim 6) a forwarding plane. (Everdell-Paragraph 153)

Everdell disclosed (re. Claim 7) the infrastructure further comprising at least one standardized application programming interface. (Everdell-Paragraph 109)

Everdell disclosed (re. Claim 8) the application programming interface further comprising an application programming interface in accordance with the Network Processing Forum. (Everdell-Paragraph 109, Paragraph 125, 'API')

Everdell disclosed (re. Claim 9) the infrastructure module further comprising a namespace to allow registration of components of the infrastructure module. (Everdell-Paragraph 110, Paragraph 146)

Everdell disclosed (re. Claim 10) the infrastructure module further comprising a control plane protocol module registration module and a packet redirection module. (Everdell-Paragraph 110, Paragraph 112, Paragraph 146)

Everdell disclosed (re. Claim 11) the infrastructure module further comprising a binding and discovery module (Everdell-Paragraph 483) and a transport module to allow the infrastructure module to communicate with other infrastructure modules on other network devices. (Everdell-Paragraph 10, Paragraph 145)

Everdell disclosed (re. Claim 12) the communication library further comprising a peer control plane protocol module application programming interface. (Everdell-Paragraph 557, '*separation of the data plane (device drivers) and control plane applications) results in the device drivers being peers of the applications.*') )

Everdell disclosed (re. Claim 13) the communication library further comprises a messaging layer. (Everdell-Paragraph 109)



Everdell disclosed (re. Claim 14) the communication library further comprising a transport abstraction layer to handle interconnection and transport protocols. (Everdell-Paragraph 161)

Everdell disclosed (re. Claim 15) a system, comprising: a control plane having a control plane processor; at least one forwarding plane having a forwarding plane processor; a backplane to provide connectivity between the control plane and the forwarding plane; (Everdell-Paragraph 146, '*client out-of-band management channel* ') and an infrastructure module resident on the control plane and the forwarding plane constructed and arranged to manage the connectivity between the control plane and the forwarding plane.

Everdell disclosed (re. Claim 16) the system further comprising a communication library resident on the control plane and the forwarding plane (Everdell-Paragraph 109, Paragraph 125, 'API') to communicate with the infrastructure module to obtain information about control plane protocol modules and to setup connections with the control plane protocol modules.

Everdell disclosed (re. Claim 17) the control plane further comprising a

controller control plane protocol module. (Everdell-Paragraph 166, '*master control driver MCD*', Paragraph 577, '*Master SRM*')

Everdell disclosed (re. Claim 18) the forwarding plane further comprises a worker control plane protocol module. (Everdell-Paragraph 577, '*local resiliency managers LRM*')

Everdell disclosed (re. Claim 19) a method of distributing processing in a network device, comprising: defining controller and worker control plane protocol modules; (Everdell-Paragraph 8, '*each distributed processor within the network device*') developing corresponding entries in a communications library; (Everdell-Paragraph 109, Paragraph 125, '*API*') implementing an infrastructure module, the communication library and the controller module on a control plane; (Everdell-Paragraph 6) and implementing the infrastructure module, the communication library and the worker modules on a forwarding plane. (Everdell-Paragraph 153)

Everdell disclosed (re. Claim 20) defining a controller and worker control plane protocol modules further comprising providing interfaces between the controller and worker modules. (Everdell-Paragraph 109, Paragraph 125, '*API*')

Art Unit: 2144

Everdell disclosed (re. Claim 21) developing corresponding entries in a communications library further comprising developing instructions that, when executed, cause the controller and worker control plane protocol modules to communicate. (Everdell-Paragraph 146, ' *client out-of-band management channel* ')

Claims 22-24 (machine readable instructions) are rejected on the same basis as Claims 1-21.

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.


Art Unit: 2144

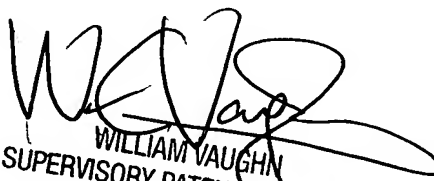
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gcb  


  
WILLIAM VAUGHN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100